VOL. 549, NOS. 1+2 JOURNAL OF CHROMATOGRAPHY JULY 19, 1991

CONTENTS

(*Abstracts/Contents Lists published in Analytical Abstracts, Biochemical Abstracts, Biological Abstracts, Chemical Abstracts, Chemical Titles, Chromatography Abstracts, Current Contents/Life Sciences, Current Contents/Physical, Chemical & Earth Sciences, Deep-Sea Research/Part B: Oceanographic Literature Review, Excerpta Medica, Index Medicus, Mass Spectrometry Bulletin, PASCAL-CNRS, Referativnyi Zhurnal, Research Alert and Science Citation Index*)

REGULAR PAPERS

Liquid Chromatography

Silica: backbone material of liquid chromatographic column packings (Review)
by A. Berthod (Villeurbanne, France) (Received February 21st, 1991) 1

Selectivity of carbon packing materials in comparison with octadecylsilyl- and pyrenylethylsilylsilica gels in reversed-phase liquid chromatography
by N. Tanaka, T. Tanigawa, K. Kimata, K. Hosoya and T. Araki (Kyoto, Japan) (Received March 19th, 1991) 29

Study of the fluoride adsorption characteristics of porous microparticulate zirconium oxide
by J. A. Blackwell (St. Paul, MN, USA) and P. W. Carr (Minneapolis, MN, USA) (Received April 9th, 1991) 43

Fluoride-modified zirconium oxide as a biocompatible stationary phase for high-performance liquid chromatography
by J. A. Blackwell (St. Paul, MN, USA) and P. W. Carr (Minneapolis, MN, USA) (Received April 9th, 1991) 59

Comparison of the selectivity of di(methacryloyloxymethyl)-naphthalene–divinylbenzene copolymers in reversed-phase high-performance liquid chromatography
by B. Gawdzik (Lublin, Poland) (Received March 19th, 1991) 77

Metal affinity displacement chromatography of proteins
by Y. J. Kim and S. M. Cramer (Troy, NY, USA) (Received March 22nd, 1991) 89

Two-dimensional viscous flow analysis in a micro flow-cell of an ultraviolet absorption detector for high-performance liquid chromatography
by M. Kamahori, Y. Watanabe and H. Miyagi (Tokyo, Japan) and H. Ohki and R. Miyake (Ibaraki, Japan) (Received October 30th, 1990) 101

High-performance liquid chromatography of reaction mixtures from the oxidation and degradation of lactose
by L. A. Th. Verhaar, H. E. J. Hendriks, W. P. Th. Groenland and B. F. M. Kuster (Eindhoven, Netherlands) (Received February 28th, 1991) 113

Column liquid chromatographic determination of saccharides with a single calibration graph using post-column enzyme reactors and coulometric detection
by N. Kiba, K. Shitara, H. Fuse and M. Furusawa (Kofu, Japan) and Y. Takata (Katsuta, Japan) (Received March 14th, 1991) 127

Improved separation of lysoglycolipids from solvolysates by reversed-phase high-performance liquid chromatography
by N. Kato, S. Gasa, A. Makita and H. Oguchi (Sapporo, Japan) (Received February 27th, 1991) 133

Ovine luteinizing hormone. V. Significance of flow-through peaks observed during chromatofocusing as revealed by various methods of sample preparation and application
by H. E. Grotjan and B. D. Schanbacher (Lincoln, NE, USA) and B. A. Keel (Wichita, KS, USA) (Received March 11th, 1991) 141

Ovine luteinizing hormone. VI. Analysis of the misclassification errors in the separation of intrapituitary isohormones by chromatofocusing
by H. E. Grotjan and D. D. Zalesky (Lincoln, NE, USA) (Received March 11th, 1991) . 153

(Continued overleaf)

Experimental design for the optimization of the separation of aliphatic amines by ion chromatography
by J. Vialle, P. Navarro and T. T. Nguyet (Vernaison, France) and P. Lanteri and R. Longeray (Villeurbanne, France) (Received March 26th, 1991) 159

Large-scale purification of the synthetic peptide fragment 163–171 of human interleukin-β by multidimensional displacement chromatography
by G. C. Viscomi, C. Cardinali, M. G. Longobardi and A. S. Verdini (Siena, Italy) (Received April 3rd, 1991) 175

Bioanalysis of the neuropeptide des-enkephalin-γ-endorphin by high-performance liquid chromatography with on-line sample pretreatment using gel permeation and solid-phase isolation
by D. S. Stegehuis, U. R. Tjaden, C. M. B. van den Beld and J. van der Greef (Leiden, Netherlands) (Received March 12th, 1991) 185

Mobile phase effects in the high-performance affinity purification of thermolysin
by M. Zamai (Padova, Italy) and G. Fassina (Milan, Italy) (Received February 13th, 1991) 195

High-performance liquid chromatography of synthetic oligonucleotides. A new affinity protecting group
by R. K. Gaur (Delhi, India) (Received February 1st, 1991) 207

Separation and simultaneous high-performance liquid chromatographic determination of benzocaine and benzyl benzoate in a pharmaceutical preparation
by B. Gigante, A. M. V. Barros, A. Teixeira and M. J. Marcelo-Curto (Queluz, Portugal) (Received March 8th, 1991) 217

Stability-indicating high-performance liquid chromatographic assay for α-methyldopa in sustained-release capsules
by M. E.-S. Metwally (El-Mansoura, Egypt) (Received March 19th, 1991) 221

High-performance liquid chromatographic determination of atrazine, deisopropylatrazine and deethylatrazine in soils from corn fields
by G. Karlaganis and R. von Arx (Berne, Switzerland), H. U. Ammon (Zurich, Switzerland) and R. Camenzind (Belp, Switzerland) (Received March 20th, 1991) 229

Carrier effect in the analysis of phenylurea herbicides using high-performance liquid chromatography–particle beam-mass spectrometry
by M. J. Incorvia Mattina (New Haven, CT, USA) (Received March 5th, 1991) 237

Separation and identification of sulfurized alkylphenols in oil by high-performance liquid chromatography with evaporative light scattering and mass spectrometric detection
by E. N. Chen, Jr. and V. P. Nero (Beacon, NY, USA) (Received April 16th, 1991) . . . 247

Simultaneous analysis of anions and cations by single-column ion chromatography
by R. Saari-Nordhaus and J. M. Anderson, Jr. (Deerfield, IL, USA) (Received March 26th, 1991) 257

Ion chromatography of inorganic iodine species using C_{18} reversed-phase columns coated with cetyltrimethylammonium
by K. Ito, E. Shoto and H. Sunahara (Higashi-Hiroshima, Japan) (Received March 5th, 1991) 265

Gas Chromatography

Gas chromatographic properties of organoammonium exchanged montmorillonites. I. Tetraalkylammonioum cations
by G. A. Eiceman and A. S. Lara (Las Cruces, NM, USA) (Received January 28th, 1991) 273

Gas chromatographic retention properties of organoammonium exchanged montmorillonites. II. $CH_3N^+H_3$, $(CH_3)_4N^+$, $(CH_3)_3N^+CH_2C_6H_5$ and 1,4-diazabicyclo[2.2.2]octane · $2H^+$
by A. S. Lara and G. A. Eiceman (Las Cruces, NM, USA) (Received January 28th, 1991) 283

Evaluation of gas chromatography–Fourier transform infrared spectroscopy–mass spectrometry for analysis of phenolic compounds
by D. T. Williams (Ottawa, Canada), Q. Tran and P. Fellin (Toronto, Canada) and K. A. Brice (Downsview, Canada) (Received October 18th, 1991) 297

Gas chromatographic determination of nitrophenols in atmospheric liquid water and airborne particulates
by R. Herterich (Bayreuth, Germany) (Received March 20th, 1991) 313

Improved method for prediction of gas chromatographic retention indices of C_9–C_{12} alkylbenzenes
by N. Dimov (Sofia, Bulgaria) and E. Matisová (Bratislava, Czechoslovakia) (Received March 26th, 1991) 325

Continuous automatic monitoring of volatile organic compounds in aqueous streams by a modified purge-and-trap system
by J. G. Schnable, M. B. Capangpangan and I. H. Suffet (Philadelphia, MA, USA) (Received April 8th, 1991) 335

Electrophoresis

Quantitative analysis in capillary zone electrophoresis with conductivity and indirect UV detection
by M. T. Ackermans, F. M. Everaerts and J. L. Beckers (Eindhoven, Netherlands) (Received March 19th, 1991) 345

Quantitation of insulin injection by high-performance liquid chromatography and high-performance capillary electrophoresis
by M. Lookabaugh (Winchester, MA, USA), M. Biswas (Burlington, MA, USA) and I. S. Krull (Boston, MA, USA) (Received April 8th, 1991) 357

Application of micellar electrokinetic capillary chromatography to the determination of flavonoid drugs
by P. G. Pietta and P. L. Mauri (Milan, Italy), A. Rava (Pavia, Italy) and G. Sabbatini (Milan, Italy) (Received March 25th, 1991) 367

Separation of seven tricyclic antidepressants using capillary electrophoresis
by K. Salomon, D. S. Burgi and J. C. Helmer (Palo Alto, CA, USA) (Received January 9th, 1991) 375

Planar Chromatography

Rapid and sensitive method for the quantitation of non-polar lipids by high-performance thin-layer chromatography and fluorodensitometry
by M. J. Kurantz, R. J. Maxwell, R. Kwoczak and F. Taylor (Philadelphia, PA, USA) (Received April 3rd, 1991) 387

SHORT COMMUNICATIONS

Liquid Chromatography

Detection of octopamine in an insect ganglion by high-performance liquid chromatography–native fluorescence
by F. Miyagawa, Y. Tsuchida and T. Shimizu (Tokyo, Japan) (Received February 14th, 1991) 400

The effect of ^2H_2O and an ion-pairing agent on the liquid chromatographic separation of dansylated amino acids
by G. N. Okafo and P. Camilleri (Welwyn, UK) (Received February 12th, 1991) 404

High-performance liquid chromatographic method for the determination of cloxacillin in commercial preparations and for stability studies
by M.-C. Hsu and M.-C. Cheng (Taipei, Taiwan) (Received March 26th, 1991) 410

(Continued overleaf)

Gas Chromatography

Hydrogen–deuterium exchange in fused-silica capillary columns
by M. E. Mahmoud, A. M. Moussa, D. A. Forsyth and P. Vouros (Boston, MA, USA) (Received March 13th, 1991) 416

Application of substituted liquid crystals as stationary phases in gas–liquid chromatography for the separation of mono- and dimethyl naphthalenes
by B. B. Ghatge and N. V. Bhalerao (Pune, India) (Received April 5th, 1991) 423

Cyclic aryleneazachalcogenenes. IV. Gas chromatographic properties of polyfluorinated 2,1,3-benzoselenadiazoles
by V. L. Salenko, M. L. Troshkov and A. V. Zibarev (Novosibirsk, USSR) (April 3rd, 1991) 429

Application of a metal capillary column in gas chromatographic determination of catechol-O-methyltransferase activity
by S. Koh, K. Urayama and S. Kawai (Gifu, Japan) and Y. Takayama (Toyohashi, Japan) (Received March 22nd, 1991) 434

Gas chromatography of some polymethoxylated flavones and their determination in orange peel oils
by E. M. Gaydou, T. Berahia, J.-C. Wallet and J.-P. Bianchini (Marseille, France) (Received March 13th, 1991) 440

Electrophoresis

Capillary zone electrophoresis with a linear, non-cross-linked polyacrylamide gel: separation of proteins according to molecular mass
by A. Widhalm, C. Schwer, D. Blaas and E. Kenndler (Vienna, Austria) (Received April 4th, 1991) 446

Author Index 453

Erratum 456

In articles with more than one author, the name of the author to whom correspondence should be addressed is indicated in the article heading by a 6-pointed asterisk (*)